CHAPTER

7

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ENVIRONMENTAL CONSIDERATIONS

GENERAL

Environmental clearance is needed prior to obtaining most permits. The agencies issuing the permits are; U.S. Coast Guard, Department of Army, U.S. Corps of Engineers, LA Department of Natural Resources Coastal Management Division and LA Department of Wildlife and Fisheries. For most "normal projects" a preliminary environmental clearance will be sufficient prior to ordering a survey. However for projects which affect wetlands, cause displacements, or affect environmentally sensitive areas, an environmental clearance will be required prior to ordering a survey. The environmental document will fall into one of the following categories: Environmental Impact Statement, Environmental Assessment, or Categorical Exclusion. An Environmental Assessment (EA) provides sufficient environmental documentation to determine whether an Environmental Impact Statement (EIS) is required or whether a Finding of No Significant Impact (FONSI) can be made. A Categorical Exclusion (CE) is a class of actions, which do not have a significant effect on the human environment. This action requires minimal documentation.

REQUIRED INFORMATION

Preliminary Project Description

1. Written Preliminary Project Description[1]
2. Identify The Preferred Alternate,(if one exists, and its justification)[1]
3. Existing Right-Of-Way and/or Existing Apparent Right-Of-Way[1]
4. Typical Required Right-Of-Way[1]
5. Which Side Of The Road The Right-Of-Way Extends[1]
6. Aerials with Approximate Existing and Required Right-Of-Way Marked[1]

[1] NEEDED FOR DETERMINATION OF CATEGORICAL EXCLUSION OR ENVIRONMENTAL ASSESSMENT

Traffic Data

1. Average Daily Traffic[2]
2. Turning Movement Diagrams

Information To Forward As Obtained

1. Field Rolls[2]
2. Construction Cost[2]
3. Data from The Reconnaissance Evaluation/Pre-Design Planning Conference
4. Location and Survey Plans
5. Preliminary Plans
6. Building Outlines and Elevations
7. Profiles of Main Line, Ramps, and Crossroads
8. Cross Sections by Stations or Half Stations
9. Contour Maps,(if available)

Information From Initial Field Study

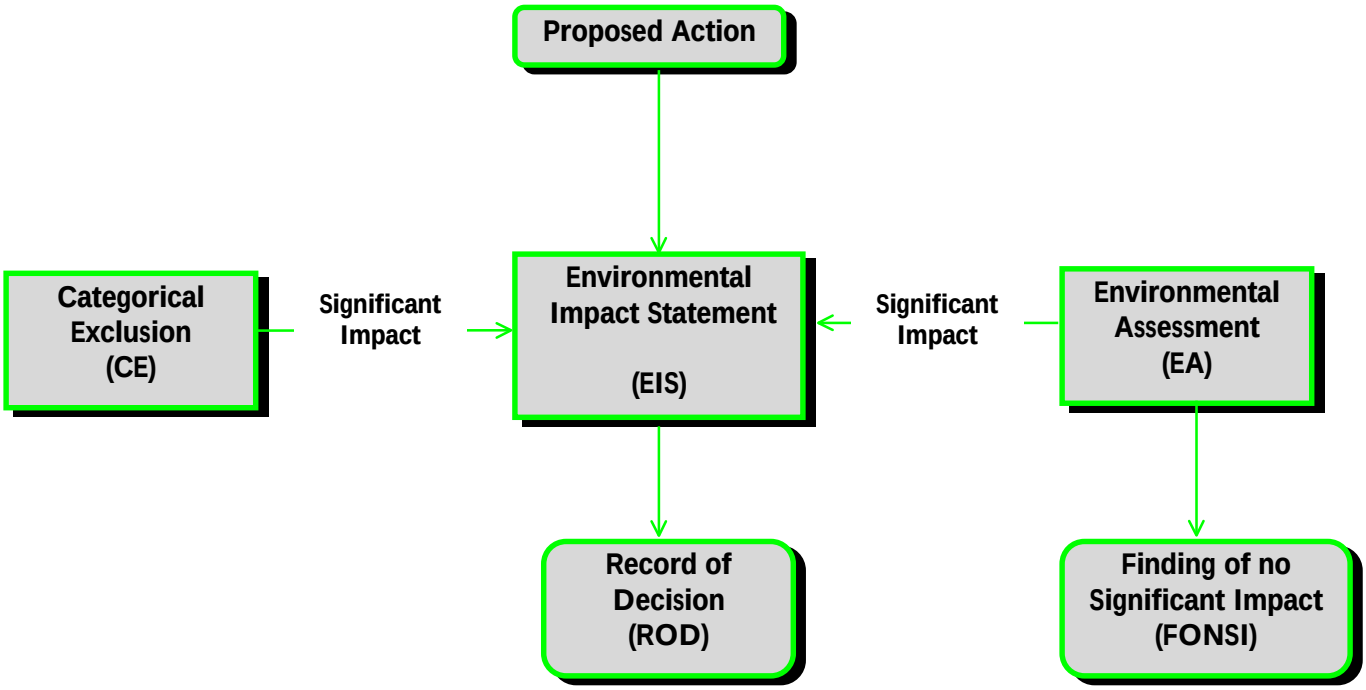
1. Presence of Hazardous Waste[2]
2. Presence of Above Ground Storage Tanks[2]
3. Presence of Filler Caps Or Pump Islands[2]
4. Presence of Water Wells[2]
5. Presence of Parks/Playgrounds/Recreational Facilities[2]
6. Presence of Hotel/Motels/Offices[2]
7. Presence of Cemeteries/Churches[2]

[2] NEEDED FOR DETERMINATION OF CATEGORICAL EXCLUSION OR ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL PROCESS FLOW CHART

PROCESSING OPTIONS:

1. Categorical Exclusion
2. Environmental Assessment
3. Environmental Impact Statement



PERMITS

Section 4(f) (Title 49, United States Code, Section 303)

Section 4(f) applies to historic properties and archaeological sites listed or eligible for listing on the National Register, **publicly owned** public parks, recreation areas, wildlife refuges and waterfowl refuges. When parks, recreational areas, and wildlife and waterfowl refuges are owned privately, even if such areas are open to the public, Section 4(f) does not apply. The Federal Highway Administration does, however, strongly encourage the preservation of such privately owned lands. If a governmental body has a proprietary interest in the land (such as fee ownership, drainage easement, or wetland easement), it can be considered "publicly owned". Any action requiring the use of Section 4(f) property cannot proceed until the Federal Highway Administration gives a Section 4(f) approval (49 U.S.C. 303(C)). It must be clearly demonstrated that there is no other prudent and feasible alternate to the use of the 4(f) property. The Environmental Section obtains this approval.

Section 6(f) (Title 16, United States Code, Section 4601-8(F)

Section 6(f) establishes restrictions on the use of land acquired with funds authorized under the Land and Water Conservation Fund Act and is administered by U.S. Department of the Interior. The Environmental Section obtains this approval.

Section 106 (Title 33, Code of Federal Regulations, Part 800)

This is the review process established by the National Historic Preservation Act of 1966 to determine and mitigate the effect of federal projects on historic properties listed on or eligible for listing on the National Register of Historic Places.

DEFINITIONS

The following is a list of environmental terms and their definitions:

WETLANDS

According to the United States Department of Transportation wetlands are defined as lowlands covered with shallow and sometimes temporary or intermittent waters. This includes but is not limited to, areas known as swamps, marshes, bogs, sloughs, pot holes, wet meadows, river overflows and shallow lakes and ponds with emergent vegetation. Areas covered with water for such a short time that there is no effect on moist soil vegetation are not included in the definition, nor are the permanent waters of streams, rivers, reservoirs and deep lakes. The United States Corps of Engineers define wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstance do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas".

FILL MATERIAL

Any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a waterway.

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

The Federal Highway Administration, after reviewing the Environmental Assessment along with public hearing transcript (if one was held), determines that the proposed activity will not have significant impacts.

ENVIRONMENTAL IMPACT STATEMENT

The EIS is a complex, comprehensive document which summarizes the major issues to be resolved, the alternatives, the conclusions, the purpose and need for the project and the affected environment. The topics usually included in the Draft EIS are: summary; table of contents; purpose of and need for action; alternatives considered; affected environment; environmental consequences; land use impacts; farmland impacts; social impacts; relocation impacts; economic impacts; joint development; consideration relating to pedestrians and bicyclists; air quality impacts; noise impact; water quality impacts; permits; wetland impacts; water body modifications and wildlife impacts; floodplain impacts; wild and scenic rivers; coastal barriers; coastal zone impacts; threatened or endangered species; historic and archeological preservation; hazardous waste sites; visual impacts; energy; construction impacts; relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; any irreversible and irretrievable commitments of resources which would be involved in the proposed action;

list of preparers; list of agencies, organizations and persons receiving copies of the statement; comments and coordination. The Final EIS incorporates the Draft EIS (essentially in its entirely) with changes made as appropriate to reflect the selection of an alternative, modifications to the project, updated information on the affected environment; changes in assessment of impacts; selection of mitigation measures; wetland and floodplain findings; results of coordination; comments received on the draft EIS and responses to the comments.

RECORD OF DECISION (ROD)

Record of Decision(ROD) is a result of the EIS.

ENVIRONMENTAL ASSESSMENT (EA)

The primary purpose of this document is to provide sufficient environmental documentation for the Federal Highway Administration and the Department to decide whether or not an Environmental Impact Statement is needed. The EA should thus address only those resources or features that will have a likelihood of being significantly impacted. It is a concise document and does not contain lengthy descriptions or detailed information. Topics included are purpose and need for action; alternatives; impacts; comments and coordination; appendices; Section 4(f) evaluation (if applicable).

CATEGORICAL EXCLUSION (CE)

CFR 771.117 identifies CEs as actions which meet the definition contained in 40CFR 1508.4 and, based on past experience with similar actions, do not involve significant environmental impacts. They are actions which, do not induce significant impacts to planned growth or land use for the area; do not require the relocation of significant numbers of people; do not have a significant impact on any natural, cultural, recreation, historic or other resource; do not involve significant air, noise or water quality impacts; do not have significant impacts on travel patterns; or do not otherwise, either individually or cumulative, have any significant environmental impacts.

Examples of projects which are normally classified as CEs include the approval of utility installations along or across a transportation facility and emergency repairs under 23 USC125.

Projects which may be processed as CEs based on the supporting documentation include bridge rehabilitation, reconstruction, or replacement.

DEPARTMENT OF THE ARMY

U.S.CORPS OF ENGINEERS PERMITS

GENERAL

The United States Army Corps of Engineers has been the authority for regulating activities in the nation's waters since 1890. Until the 1960's the primary purpose of the regulatory program was to protect navigation. Since then, as a result of laws and court decisions, the program has been broadened so that it now considers the full public interest for both the protection and utilization of water resources.

Permits are obtained by the Federal Permit Coordinator, Bridge Design Section from the four (4) Corps of Engineers Districts which have jurisdiction over this State.

In the preliminary design phase of major roadway and bridge projects, transmit by letter pertinent data (such as Advanced Draft Environmental Assessment, Engineering Report, Navigation Study, Draft ENG 4345, and permit sketches) to the appropriate Corps of Engineers District and Coast Guard (if applicable) for review and comment.

Boring operations may be conducted prior to obtaining a permit. In this case, transmit for the Corps' information, review, and comment all pertinent data (number, location, description, and depth below surface) along with a copy of the bridge general plan. Also, through a copy of the transmittal letter, request the appropriate Levee District Board of Commissioners and Office of Public Works to comment directly to the District Engineer in accordance with established procedures.

The permit process should begin approximately nine (9) months prior to the letting of a roadway or bridge construction contract. Projects must be environmentally cleared prior to submitting permit application. The Federal Permit Coordinator is responsible for direct contact with the Corps of Engineers and attends and coordinates, when necessary, all meetings concerning the permit process. This will include, but is not limited to, on-site permit determinations with personnel from the Corps of Engineers, Louisiana Department of Wildlife and Fisheries, DOTD Environmental Section, etc., and in-house meetings.

DEFINITIONS

Dredged Materials

Material that is excavated or dredged from waters of the United States.

PERMITS

Section 10 (Title 33, United States Code, Section 403)

Rivers and Harbors Act of 1899, Section 10 prohibits the obstructions or alterations of any navigable waters of the United States without a permit. Permits are issued by the U.S. Department of the Army, Corps of Engineers.

Section 404 (Title 33, United States Code, Sections 1357-1376)

This is a permit program administered by the United States Department of the Army, Corps of Engineers under the Environmental Protection Agency guidelines. The Corps of Engineers has been the authority for regulating activities in the nation's waters since 1890. Until the 1960's the primary purpose of the regulatory program was to protect navigation. Since then, as a result of laws and court decisions, the program has been broadened so that it now considers the full public interest for both the protection and utilization of water resources.

The Section 404 Permit Program prohibits the discharge of dredged or fill material into water of the United States without a permit. Permits applications are processed by the Federal Permit Coordinator, Bridge Design Section. Permits are issued by Corps of Engineers.

Nationwide Permits, 33 Cfr Part 330 - Federal Register Volume 56, No. 226, P.59110 - 59147, November 21, 1991

The two (2) most commonly used by DOTD are Nationwide Permit 23, Approved Categorical Exclusions, and Nationwide Permit 26, Headwaters and Isolated Waters Discharges. The Corps of Engineers determines which projects qualify for this program after reviewing permit submittals and on-site inspections.

NOTES:

1. BRIDGE PIERS AND SUPPORTS ARE NOT PERMITTED ON OR WITHIN THE THEORETICAL DESIGN LEVEE SECTION. OBTAIN THE THEORETICAL DESIGN LEVEE SECTION FROM THE CORPS OF ENGINEERS. IF LEVEES AT THE BRIDGE CROSSING ARE DEFICIENT IN GRADE OR SECTION, DESIGN THE BRIDGE TO ALLOW FOR LEVEE ENLARGEMENT TO THEORETICAL DESIGN SECTION IN THE FUTURE.

2. PREPARE A STABILITY ANALYSIS FOR THE LEVEE AND ADJACENT RIVERBANK USING THE FOLLOWING PROCEDURE AND SUBMIT THE STABILITY ANALYSIS WITH THE APPLICATION FOR PERMIT.

   A. MAKE BORINGS TO DETERMINE FOUNDATION CONDITIONS, AND MAKE LABORATORY TESTS OF THE SUBSURFACE MATERIALS. CONSULT WITH THE CORPS OF ENGINEERS ON THE SCOPE OF THE BORINGS AND TESTS BEFORE PREPARING THE STABILITY ANALYSIS.

CONTINUED.... NO. 2

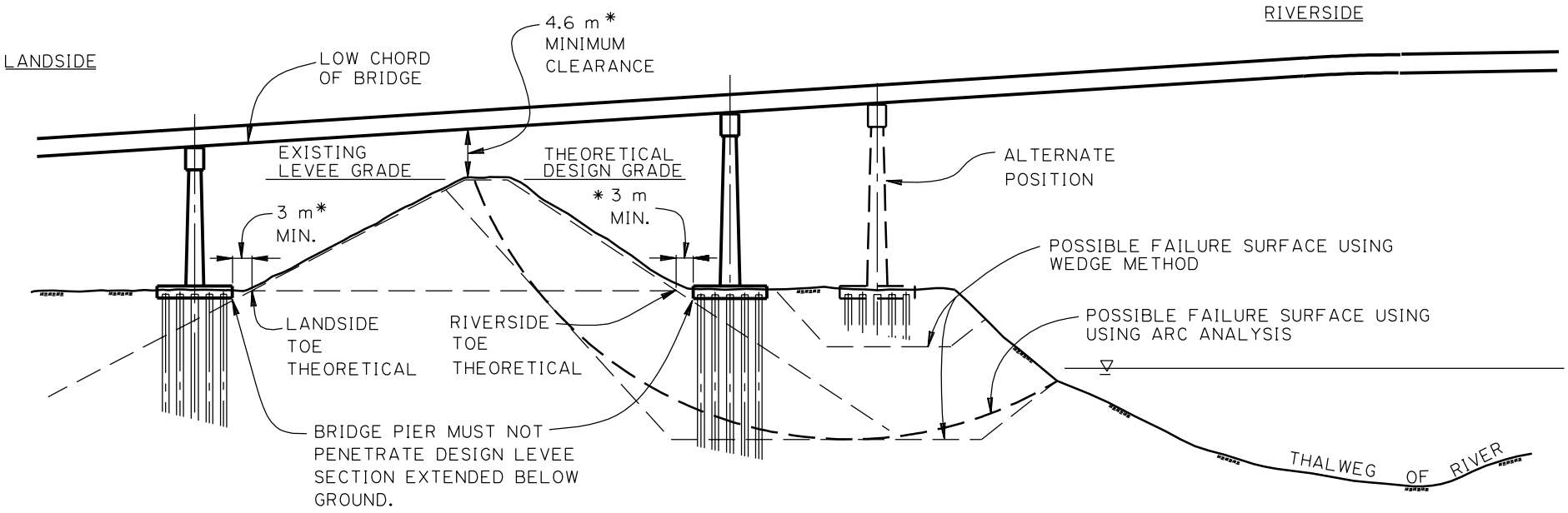
B. MAKE AN INSTRUMENTAL SURVEY OF THE GROUND SURFACE BEGINNING 6 m LANDWARD OF THE LANDSIDE LEVEE TOE AND EXTENDING RIVERWARD TO THE THALWEG OF THE RIVERBED.

C. AFTER IMPOSING THE BRIDGE LOADS, ANALYZE THE STABILITY OF THE LEVEE AND ADJACENT RIVERBANK USING THE WEDGE METHOD. A MINIMUM FACTOR OF SAFETY OF 1.30 MUST BE PROVIDED FOR THE MOST CRITICAL LOADING CONDITIONS CONSIDERING BOTH DURING CONSTRUCTION AND AFTER-CONSTRUCTION CONDITIONS.

D. THE PERMIT APPLICANT MAY ALSO CHOOSE TO PRESENT ANY OTHER TYPE OF ANALYSIS PREPARED FOR THE BRIDGE DESIGN.

3. PAVE THE RIVERSIDE LEVEE SLOPE BENEATH THE BRIDGE, AND EXTEND 1.5 m UPSTREAM AND DOWNSTREAM OF THE LIMITS OF THE BRIDGE DECK, WITH A 100 mm UNREINFORCED CONCRETE SLAB.

4. A MINIMUM OF 4.6 m OF VERTICAL CLEARANCE ABOVE THE EXISTING LEVEE CROWN IS REQUIRED FOR FLOODFLIGHT AND MAINTENANCE OPERATIONS. A HORIZONTAL CLEARANCE OF 4.6 m IS ALSO REQUIRED AT THE CROWN.

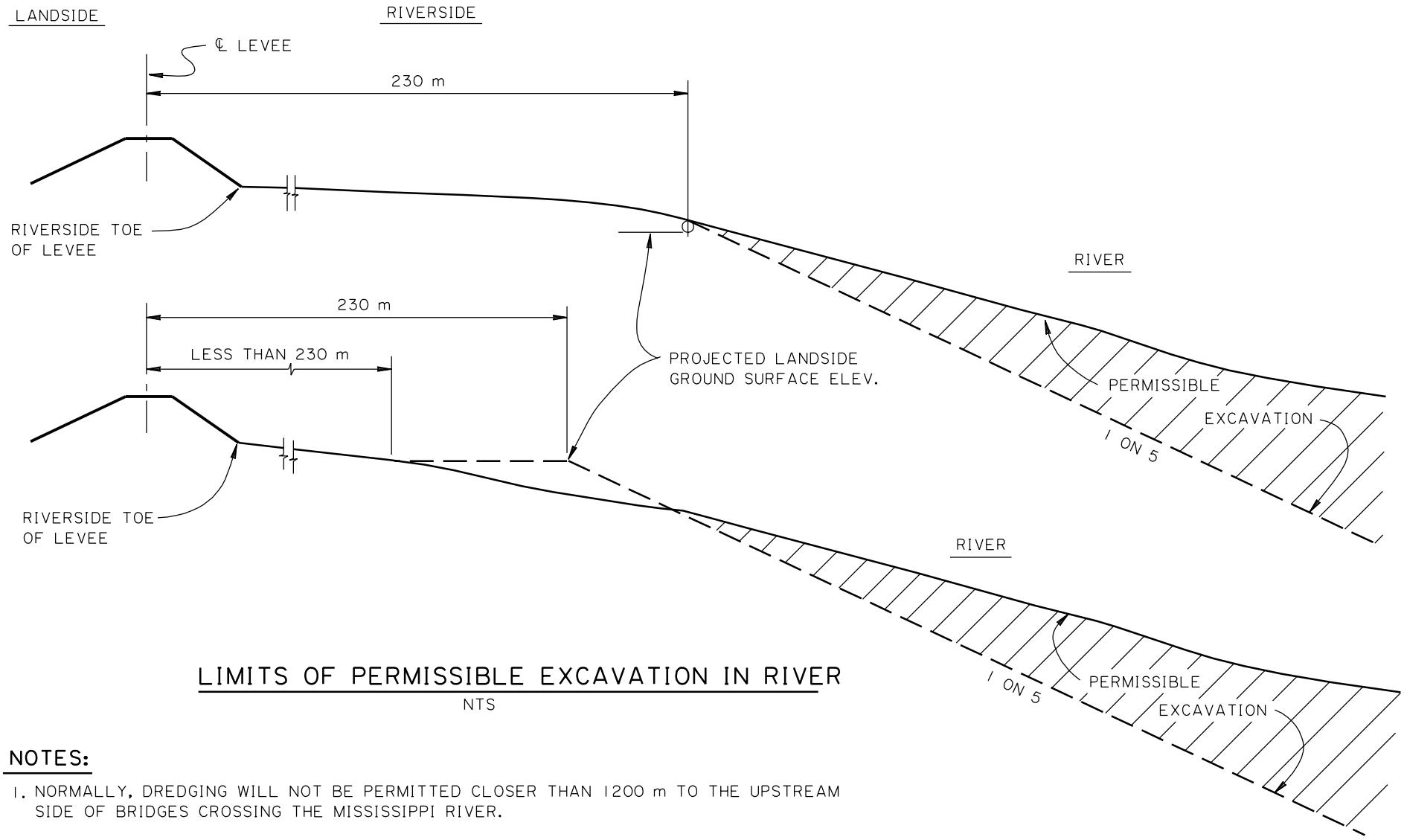


ELEVATED BRIDGE CROSSINGS OVER LEVEES

NTS

* DEVIATIONS FROM THE REFERENCED CLEARANCE HEIGHTS OVER THE LEVEE, AND REFERENCED PIER DISTANCE FROM THE LEVEE DESIGN TOE, WILL ONLY BE AUTHORIZED ON A CASE-BY-CASE BASIS WITH THE SPECIFIC APPROVAL FROM THE AFFECTED LEVEE DISTRICT. FACTORS CONSIDERED IN DETERMINING THE AUTHORIZATION OF SUCH DEVIATIONS MAY BE THE AVAILABILITY OF "RUN-A-ROUND" ROADWAYS, THE PRESENCE OF LEVEE BERMS, AND THE CONSTRUCTION OF HEADWALLS AS ABUTMENTS, ETC.

CORPS OF ENGINEERS LEVEE REQUIREMENTS



LIMITS OF PERMISSIBLE EXCAVATION IN RIVER

NTS

NOTES:

1. NORMALLY, DREDGING WILL NOT BE PERMITTED CLOSER THAN 1200 m TO THE UPSTREAM SIDE OF BRIDGES CROSSING THE MISSISSIPPI RIVER.

2. EXCAVATION MADE WITHIN THE PERMISSIBLE AREA SHALL HAVE AVERAGE SLOPES NOT STEEPER THAN 1 ON 5. BOX CUTS ARE PERMITTED TO A MAXIMUM DEPTH OF 2.0 m.

3. EXCAVATION SHALL PROCEED FROM THE LANDSIDE TO THE RIVERSIDE LIMITS OF EXCAVATION TO MINIMIZE THE POSSIBILITY OF AN "OVERBURDEN FAILURE" OF THE BANK.

CORPS OF ENGINEERS LEVEE REQUIREMENTS

UNITED STATES COAST GUARD BRIDGE PERMITS

GENERAL

All bridges which cross navigable waterways of the United States of America require a United States Coast Guard Bridge Permit. Permits are obtained by the Federal Permit Coordinator, Bridge Design Section, from the Eighth Coast Guard District which has jurisdiction over all navigable waterways in Louisiana.

In 1967, the Coast Guard was transferred to the newly formed Department of Transportation. One of the new assigned duties was the authority to issue bridge permits approving location and plans under authority of several Acts pertaining to bridges including Section 9 of the Rivers and Harbors Act of 1899 and the General Bridge Act of 1946. The Bridge Permit Application Guide states "the purpose of these Acts is to preserve the public right of navigation and to prevent interference with interstate and foreign commerce". The General Bridge Act of 1946, as amended, and the Rivers and Harbors Act of 1899, as amended, require that the location and plans be submitted to and approved by the Secretary of Transportation prior to construction of bridges and causeways across navigable waters of the United States. (The General Bridge Act of 1946 is cited as the legislative authority for bridge construction in most cases.) The Secretary of Transportation has delegated this authority to the Commandant, U. S. Coast Guard by Transportation Order 1100.1 dated 31 March 1967 (9 CFR 1.4(a)(3)).

The permit process should begin approximately one (1) year prior to the letting of a bridge construction contract. Projects must be environmentally cleared prior to submitting permit application. The Federal Permit Coordinator is responsible for direct contact with the Coast Guard and will attend and coordinate, when necessary, all meetings concerning the permit processes. These will include, but are not limited to, pre-design conferences, site inspections, etc.

In the preliminary design phase of major bridge projects, transmit by letter pertinent data (such as Advanced Draft Environmental Assessment, Engineering Report, Navigation Study, Draft ENG 4345, and permit sketches) to the Eighth Coast Guard District and the appropriate Corps of Engineers District for review and comments.

Permission must be obtained from the Eighth Coast Guard District prior to conducting boring operations in any navigable waterway, in order that a Notice to Mariners may be issued.

DEFINITIONS

Navigable Waters

For Coast Guard bridge permitting purposes a navigable waterway is defined as (unless specifically declared otherwise by Congress) "Any waterway which is presently used and/or is susceptible to use in its natural condition, or by reasonable improvements, as a means to transport interstate or foreign commerce". Also, "any waterway which is subject to the ebb and flow of the tide".

BRIDGE CLEARANCE GAUGES

1. Clearance gauges installed on bridges across navigable waters shall be so constructed and placed as to indicate the vertical distance between “low steel” of the bridge channel span and the level of the water. The gauge shall read from top to bottom. Measured from low steel to the bottom of the foot marks. The gauge shall be installed so as to face approaching traffic and shall extend to a reasonable height above high water so as to be meaningful to the viewer.

2. When a clearance gauge shall be required by the regulations, such gauge shall be installed on the end of right channel pier or pier protection structure facing approaching traffic.

3. The costs of installation and maintenance of clearance gauge installations shall be borne by the bridge owner or operator.

4. Clearance gauges shall be of durable material permanently fixed to the bridge pier, or pier protection structure, and of such strength as to provide a structure resistant to weather, tide, and current. However, clearance gauges may be painted directly on the bridge channel pier of the face if the pier is flat and has sufficient width to accommodate the foot marks (graduations) and numerals.

5. The type, size, and spacing of numerals shall conform to the “Standard Highway Signs” manual. A copy of this manual is kept in the Geometrics Section.

SETTING NAVIGATIONAL CLEARANCES

1. Obtain approved horizontal and vertical clearances for any existing bridges on the project waterway from the most recent Coast Guard publication of "Bridges over Navigable Waterways in the U.S."

2. Contract any Mariners or River Pilot associations to get any applicable information or comments about vessel traffic for your bridge site.

3. Other data that is available from DOTD or other agencies is:

A) "Summary of Navigational Openings - Movable Bridges" can be obtained from the Bridge Maintenance Section. This report is done yearly and contains the total number of bridge openings on a monthly basis.

B) "Bridge Tenders Report" can be obtained from General Files. This yearly file contains the monthly data of the number of openings at the movable bridge, the name of the vessel, the estimated height, direction of tow, number of barges, and if the barge was empty or loaded.

C) U.S. Army Corps of Engineers, "Waterborne Commerce of the U.S."

D) U.S. Army Corps of Engineers, "Waterborne Transportation Lines of the U.S."

4. If time is available, send out a survey through the District Bridge Maintenance Engineer to the Bridge Tender. The Bridge Tender would be asked to complete a form to collect data on all vessels passing through the movable bridge for a certain period of time. Any needed data such as length, width and height of vessel and tow could be obtained.

5. Contact Corps of Engineers to determine what water datum should be used to set the vertical bridge clearance. Typical datum such as 2% flow line or mean highwater have been used in the past. Normally the Corps of Engineers will provide data such as the 2% flow line upon written request. Also the authorized channel (required depth and width) should also be obtained from the Corps of Engineers.

6. Once any of the above available data is obtained and studied, a proposed horizontal and vertical clearance may be submitted to the Coast Guard in order to solicit any views and comments from the various groups. A scaled sketch of the proposed bridge and clearances should be made based on the Coast Guard's permit requirements.

7. Address any comments from the Coast Guard's Solicitation of views.

8. Write Environmental Section with appropriate data to start environmental clearing process.

9. Prepare preliminary plans.

10. Do not proceed with final plans until environmental clearance is obtained.

11. Complete the Coast Guard Permit Form after environmental clearance is received.

UNITED STATES COAST GUARD BRIDGE NAVIGATIONAL LIGHTING PERMITS

Bridges across navigable waterways which support nighttime navigation may be required to display navigational lights in accordance with Part 118.4(c) of Title 33 Code of Federal Regulations. Approval of the navigational lights and other signals required shall be obtained prior to construction. The permittee is responsible for maintaining proper temporary navigational lighting and other such markings, as may be prescribed, during construction. When the bridge is completed permanent navigational lighting is the responsibility of the permittee.

VESSEL COLLISION

The U.S. Coast Guard maintains strict guidelines to insure the least possible interference with navigation. For newly constructed bridges crossing navigable waterways, it is required that a permit sketch be submitted to the Coast Guard for their review and approval of the navigation permit. This is also generally true for reconstruction projects and extensive maintenance projects, where navigation might be affected, or any changes to the original permit is made. However, for maintenance repairs this is usually not required.

Whenever economically possible piers should be located on the banks when there are no requirements to design for vessel collision. If it becomes economically or physically unfeasible to locate the piers on the banks every effort should be made to place the piers as far away from the main channel as possible.

Bridges crossing navigable waterways where vessel collision by merchant ships or barges may be anticipated shall be designed to prevent collapse of the superstructure. Consideration should be given to the size and type of the vessel, available water depth, vessel speed, and structure response. It should be noted that the specifications do not apply to special purpose vessels, wood, or fiberglass constructed vessel, ships smaller than 1,000 DWT, naval vessels, or to recreational vessels. Vessel impact requirements for these types of vessels shall be determined by the Bridge Design Engineer.

There are various types of pier protection systems that can be used such as fender systems, dolphins, bulkheads, dikes, subshafts, protective islands, and pier walls. However, in waterways with excessive depth, these systems become unfeasible. When conditions are such, that protection from collision is not feasible, it then becomes necessary to account for vessel collision in the design of the pier. Vessel collision design should conform to the AASHTO Guide Specification and Commentary for Vessel Collision Design of Highway Bridges.

PERMIT

Section 9 (Title 33, United States Code, Section 401)

Rivers and Harbors Act of 1899, Section 9 and the General Bridge Act of 1946 as amended establishes authority to issue permits for bridges and causeways across any navigable waters of the United States. The Secretary of Transportation delegated this authority to the Coast Guard by Department of Transportation Order 1100.1 dated March 31, 1967. Permits are issued by the U.S. Coast Guard.

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL USE PERMIT

GENERAL

The Coastal Management Division of the Department of Natural Resources is charged with implementing the Louisiana Coastal Resources Program under authority of the Louisiana State and Local Coastal Resources Management Act of 1978, Act 361, La. R.S. 49:214.21 - 214.41).

This law seeks to protect, develop and, where feasible, restore or enhance the resources of the State's Coastal Zone. Its broad intent is to encourage multiple uses of resources and adequate economic growth while minimizing adverse effects of one resource use upon another without imposing undue restrictions on any user.

Permits are obtained by the Federal Permit Coordinator, Bridge Design Section from the Department of Natural Resources, Coastal Management Division.

The permit process should begin approximately nine (9) months prior to the letting of a roadway or bridge construction contract. Projects must be environmentally cleared prior to submitting permit application. The Federal Permit Coordinator is responsible for direct contact with the Coastal Management Division and attends and coordinates when necessary, all meetings concerning the permit process. This will include but is not limited to on-site permit determinations with personnel from the Coastal Management Division, Corps of Engineers, Department of Wildlife and Fisheries, DOTD Environmental Section, etc., and in-house meetings.

PERMIT

COASTAL USE PERMIT

All State and Federal Aid projects which fall within the Coastal Zone require a Coastal Use Permit. The Department of Natural Resources, Coastal Management Division, is responsible for issuing permits within the Coastal Zone. Therefore, if the project is within the Coastal Zone the permit application letter and attachments are sent to the Coastal Management Division. The Corps of Engineers and Coastal Management Division issue a joint Public Notice for interested parties to comment on the proposed project. Permits applications are processed by the Federal Permit Coordinator, Bridge Design Section. Permits are issued by the Coastal Management Division.

COASTAL ZONE BOUNDARY

The Coastal Zone is the area located south of Interstate Highways I-10 and I-12. Parishes within the Coastal Zone are as follows:

Ascension	Jefferson	St. Charles	Terrebonne
Assumption	Lafourche	St. James	Vermilion
Cameron	Plaquemines	St. John	
Iberia	St. Bernard	St. Mary	

Only the areas south of I-10 or I-12 in the following parishes are within the Coastal Zone:

Acadia	Iberville	Livingston	Tangipahoa
Calcasieu	Jefferson Davis	St. Martin	West Baton Rouge
East Baton Rouge	Lafayette	St. Tammany	

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY PERMIT

GENERAL

One of the permits necessary for having environmental clearance is a water quality certification. This permit is obtained through the Louisiana Department of Environmental Quality. The purpose of this permit is to prevent any projects from occurring that would compromise the quality of our waters. This permit is requested through the Federal Permit Coordinator (Bridge Design Section).

PERMIT

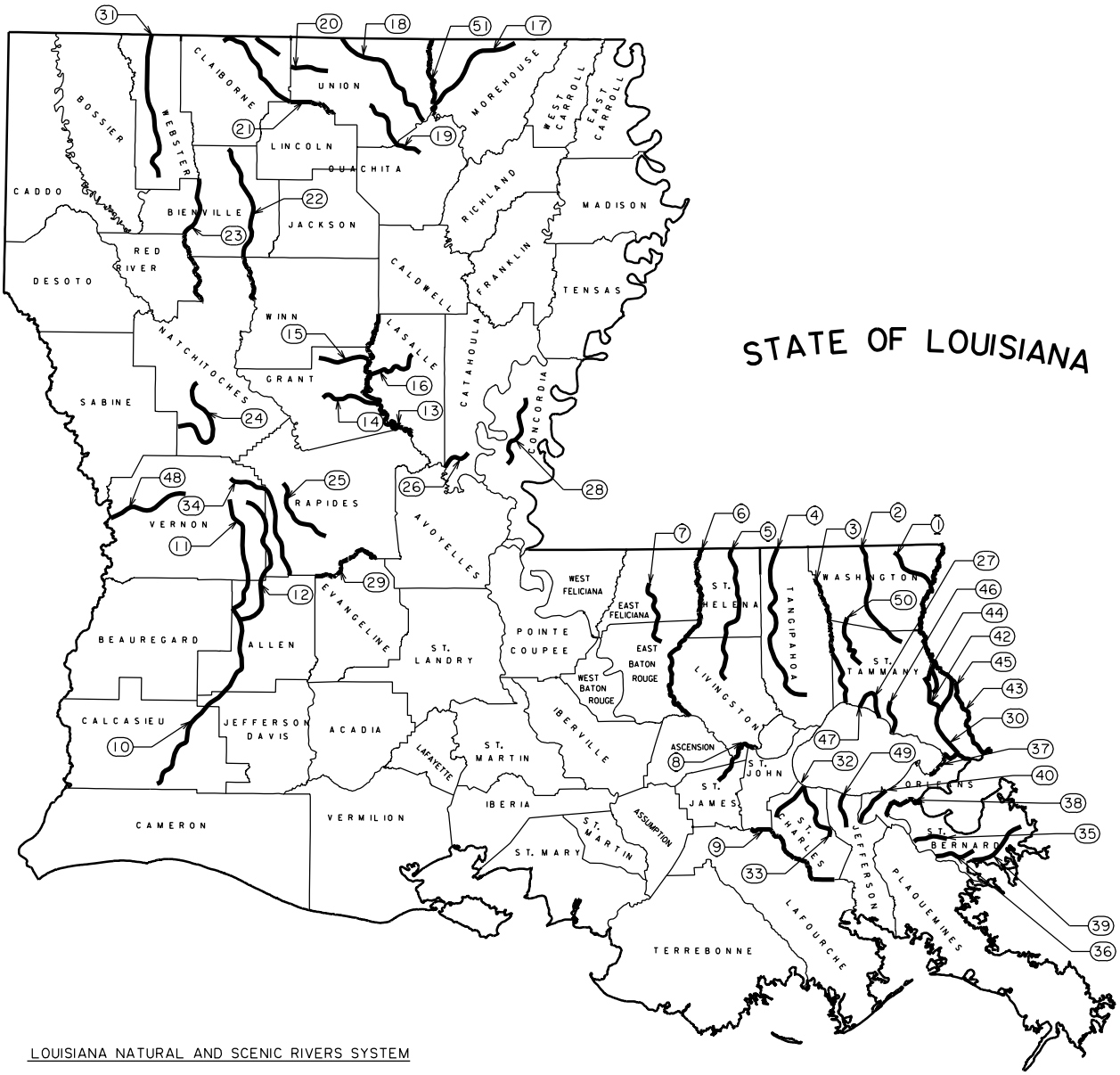
Water Quality Certification (Clean Water Act of 1977 (P.L. 95-217))

The Louisiana Department of Environmental Quality, Office of Water Resources has been designated to determine whether construction in a Louisiana waterway will violate the Water Quality Standards of the State pursuant to Public Law 92 - 500 or the Clean Water Act of 1977 (P.L. 95-217).

LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES PERMIT

CLASS B SCENIC STREAMS PERMITS

The Louisiana Natural And Scenic River Act established the Louisiana Natural and Scenic River System which is one of the Nation's largest, oldest, most diverse and unique State river protection initiatives. The streams in the system vary from fast flowing upland streams with riffles and waterfalls, through sluggish swamp bayous flanked by Spanish moss draped cypress trees to brackish water, tidal creeks in the coastal marshes. The Act established a regulatory program and delegated the authority to administer the program to the Louisiana Department of Wildlife and Fisheries. Figure on page 20 shows a list of Natural and Scenic Rivers. Since this list changes from time to time a current list should be obtained from the Environmental Section. The Environmental Section processes the Class B Permit application.



LOUISIANA NATURAL AND SCENIC RIVERS SYSTEM

1. PUSHEPATAPA RIVER
2. BOGUE CHITTO RIVER
3. TCHEFUNCTE RIVER
4. TANGIPAHOA RIVER
5. TICKFAW RIVER
6. AMITE RIVER
7. COMITE RIVER
8. BLIND RIVER
9. BAYOU DES ALLEMANDS
10. WHISKEY CHITTO CREEK
11. SIX MILE CREEK
12. TEN MILE CREEK
13. LITTLE RIVER
14. BIG CREEK
15. FISH CREEK
16. TROUT CREEK
17. BAYOU BARTHOLOMEW
18. BAYOU L'OUTRE
19. BAYOU D'ARBONNE
20. CORNEY BAYOU
21. MIDDLE FORK BAYOU D'ARBONNE
22. SALINE BAYOU
23. BLACK LAKE BAYOU
24. BAYOU KISATCHIE
25. SPRING CREEK
26. SALINE BAYOU
27. BAYOU CHINCHUBA
28. BAYOU COCODRIE (CONCORDIA)
29 BAYOU COCODRIE (EVANGELINE)
30. WEST PEARL RIVER
31. BAYOU DORCHEAT
32. BAYOU TREPAGNIER
33. BAYOU LABRANCHE
34. CALCASIEU RIVER
35. BAYOU DUPRE
36. LAKE BORGNE CANAL
37. BASHMAN BAYOU
38. TERRE BEAU BAYOU
39. PIROGUE BAYOU
40. BAYOU BIENVENUE
41. BAYOU CHAPERON
42. HOLMES BAYOU
43. BRADLEY SLOUGH
44. WILSON SLOUGH
45. MORGAN RIVER
46. BAYOU LACOMBE
47. BAYOU CANE
48. PEARL CREEK
49. BAYOU ST. JOHN
50. BOGUE FALAYA RIVER
51. OUACHITA RIVER

STATE OF LOUISIANA
SCENIC RIVERS MAP

ENVIRONMENTAL PROTECTION AGENCY

GENERAL

The National Pollution Discharge Elimination System (NPDES) was developed as a function of the 1987 Clean Water Act (CWA). The Environmental Protection Agency (EPA) is required to develop an approach to regulating storm water discharges under this Act.

The NPDES program stipulates several regulations that apply to all construction projects that disturb over five acres. Among the more important items is the requirement to file a Notice of Intent with the EPA, the development of a Storm Water Pollution Prevention Plan for the project and a certification by the Department and the contractor to abide by the terms of these regulations.

In order to comply with these mandates, the attached items should be included in the contract document for every project that qualifies under this program.

Section 405 of the Water Quality Act of 1987 (WQA) added Section 402(p) of the Clean Water Act (CWA) which requires the Environmental Protection Agency (EPA) to develop an approach to regulating storm water discharges under the National Pollution Discharge Elimination System (NPDES). The NPDES General Permit requires that discharges from construction sites will be managed to prevent pollutants from entering waters of the United States.

These specifications cover work designed to provide temporary erosion control on construction projects and in areas outside the right-of-way where work is accomplished in conjunction with the project to prevent pollution of water. These measures shall control features shown on the plans or as directed.

Installation of temporary erosion control features shall be coordinated with construction of permanent erosion control features to the extent necessary to ensure economical, effective and continuous control of erosion and water pollution throughout the life of the contract.

FEDERAL AVIATION AUTHORITY (FAA) PERMIT

GENERAL

For projects that are near airports coordination with the FAA will be required.

For all projects passing within two miles of an airport, a sketch map showing airway-highway clearances is prepared and is signed by the Chief Engineer. A print is sent to the Office of Aviation. On federal-aid projects, a print is sent to the Project Control Section, which handles the correspondence necessary for obtaining approvals from the Federal Highway Administration and the Federal Aviation Authority. On state projects, a print is sent directly to the FAA office in Houston, Texas, for approval. The project coordinator retains the original tracing of the sketch map. A sample sketch map is shown in Figure 1-4.

There are additional requirements, which prohibit construction from occurring within the glide paths of aircraft. These requirements can be found in the document titled Federal Aviation Regulations (Objects Affecting Navigable Airspace) Part 77.

SCOPE OF FAA AS REGULATORY AUTHORITY

1. Any construction or alternation of more than 61 m in height above the ground level at its site.

2. Any construction or alternation of greater height than an imaginary surface extending outward and upward at one of the following slopes: of each airport specified in subparagraph (5) of this paragraph with at least one runway more than 980 meters in actual length, excluding heliports,

   A) 1v to 100h for a horizontal distance of 6,100 m from the nearest point of the nearest runway.

   B) 1v to50h for a horizontal distance of 930 m from the nearest point of the nearest runway of each airport specified in subparagraph (5) of this paragraph with its longest runway no more than 975 meters in actual length, excluding heliports.

   C) 1v to 25h for a horizontal distance of 1524 meters from the nearest point of the nearest landing and takeoff area of each heliport specified in subparagraph (5) of this paragraph.

3. Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 5.2 meters for an Interstate Highway that is part of the National System of Military and Interstate Highways where overpasses are designed for a minimum of 5.2 meters vertical distance, 4.6 meters for any other public roadway, three (3) meters or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road, 7.2 meters for a railroad,

and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, would exceed a standard of subparagraph (1) or (2) of this paragraph.

4. When requested by the FAA, any construction or alteration that would be in an instrument approach area (defined in the FAA standards governing instrument approach procedures) and available information indicates it might exceed a standard of subpart C of this section.

5. Any construction or alteration on any of the airports (including heliports):

   A) An airport that is available for public use and is listed in the Airport Directory of the current Airman's Information Manual

   B) An airport that is under construction, that is the subject of a notice of proposal on file with the FAA, and except for military airports, it is indicated that that airport will be available for public use.

   C) An airport that is operated by an armed force of the United States.

RAILROAD REQUIREMENTS

GENERAL

Whenever possible at-grade Railroad crossings should be avoided. This may be accomplished by underpassing or overpassing the railroad. Overpasses are designed and constructed to carry highway loads. Underpasses are designed and constructed to carry railroad loads. Clearances, geometrics, utilities, provisions for future tracks, and maintenance road requirement for off-track equipment will involve coordination with the railroad company.

HORIZONTAL AND VERTICAL CLEARANCES

The horizontal and vertical clearances vary with the different railroad companies. Furthermore, the clearances required by a single company may vary because of different uses of the tracks or future plans for the tracks. The minimum clearance shown herein are to be used strictly for general information and are not a set criteria. For actual design, the clearance for the specific tracks involved must be acceptable to the railroad company involved and should be resolved early in project development.

A note should be added to the profile stating: “The elevations of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Railroad. Final plans, erection clearances, and specification must be approved by the railroad company concerned.

Figure on page 26 shows the shoring requirements for excavations adjacent to railroads. This sketch is intended to be used as a guideline in determining shoring requirements in the absence of other railroad specific guidelines.

DRAINAGE

Track drainage must be maintained and overpass drainage must be clear of the tracks and railroad bed area. No scuppers or other deck drains, roadway drainage, catch basins, inlets or outlets are permitted to drain onto Railway property. Columns, piles, and footings should be kept out of the Railroad ditch to prevent obstruction of drainage.

CRASH WALLS

Crash walls are required for all bridges over railroads in which any part of the substructure above the ground is constructed closer than 7.6 meters measured from the centerline of the track perpendicular to the track. However, the preferred horizontal clearance should be provided to avoid the need for crash walls unless extenuating circumstances dictate otherwise. Crash walls shall meet the following criteria:

1. The crash wall shall be constructed to be integral with the pier or bent and shall have a smooth face.

2. Crash walls shall have a minimum thickness of 600 mm.

3. Crash walls shall have a minimum height of 3.6 meters above the track.

4. Crash walls shall connect with the columns and extend a minimum of 300 mm beyond the face of the column parallel to the track.

5. The face of the crash wall shall extend at least 150 mm beyond the face of the pier on the side adjacent to the track .

6. The bottom of the crash wall shall be a minimum of one (1) meter below the lowest surrounding grade.

PROCEDURES TO FOLLOW TO OBTAIN RAILROAD AGREEMENTS

The railroad should be included in the plan-in-hand distribution. Submit preliminary bridge plans to railroad companies through the Department's Rail/Highway Engineer in the Maintenance Section. Show all clearances and request their tentative approval. An agreement between DOTD and the railroad is necessary. This agreement is a document, which will be included in the construction contract. The railroad will specify if off-track maintenance clearance will be required and on which side if required.

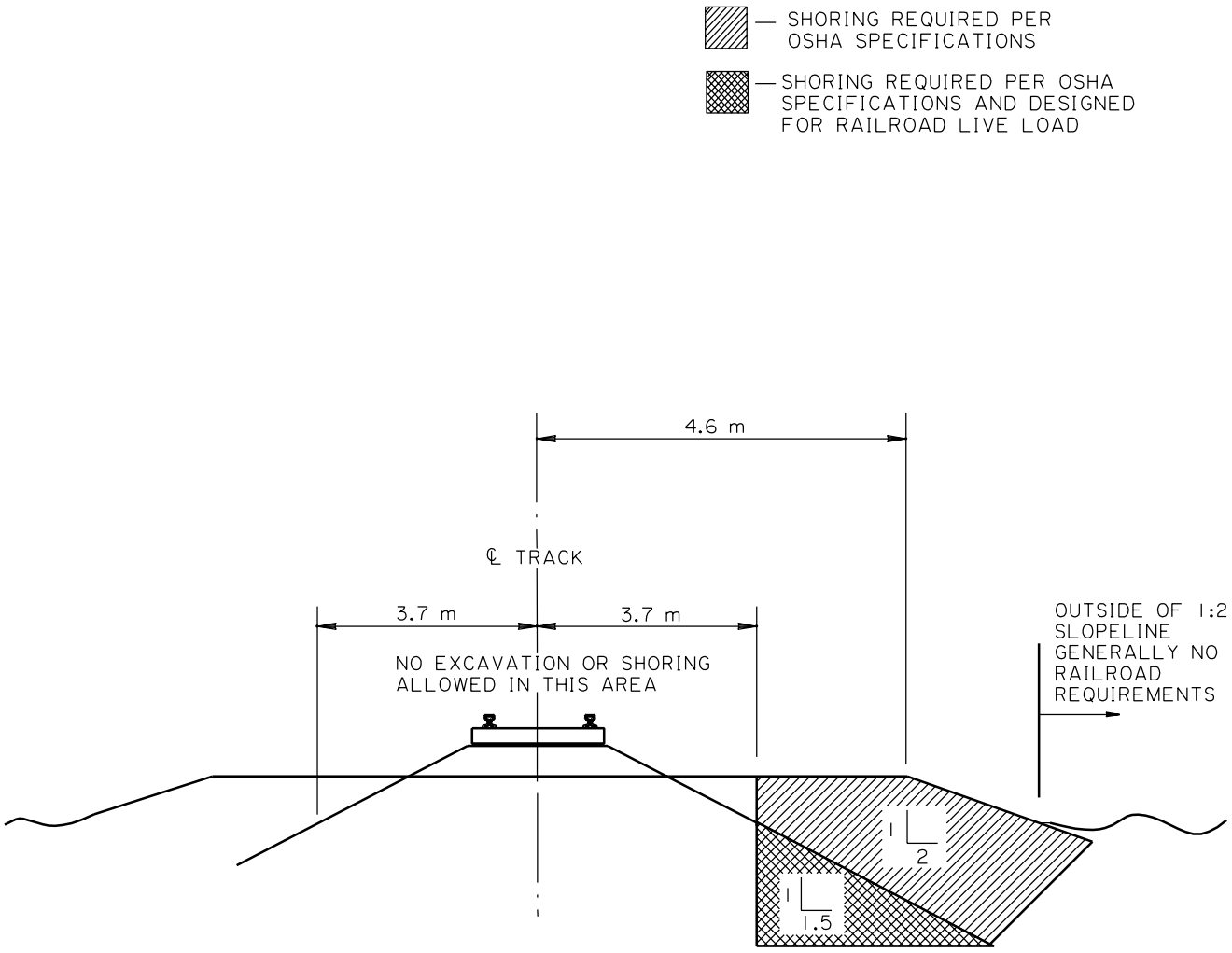
The following is a list of questions that should be asked of the Railroad prior to any alignment studies:

1. Do they have any future tracks planned at this site ?

2. Do they have any plans to adjust the ballast on this track at this location in the next ten years ?

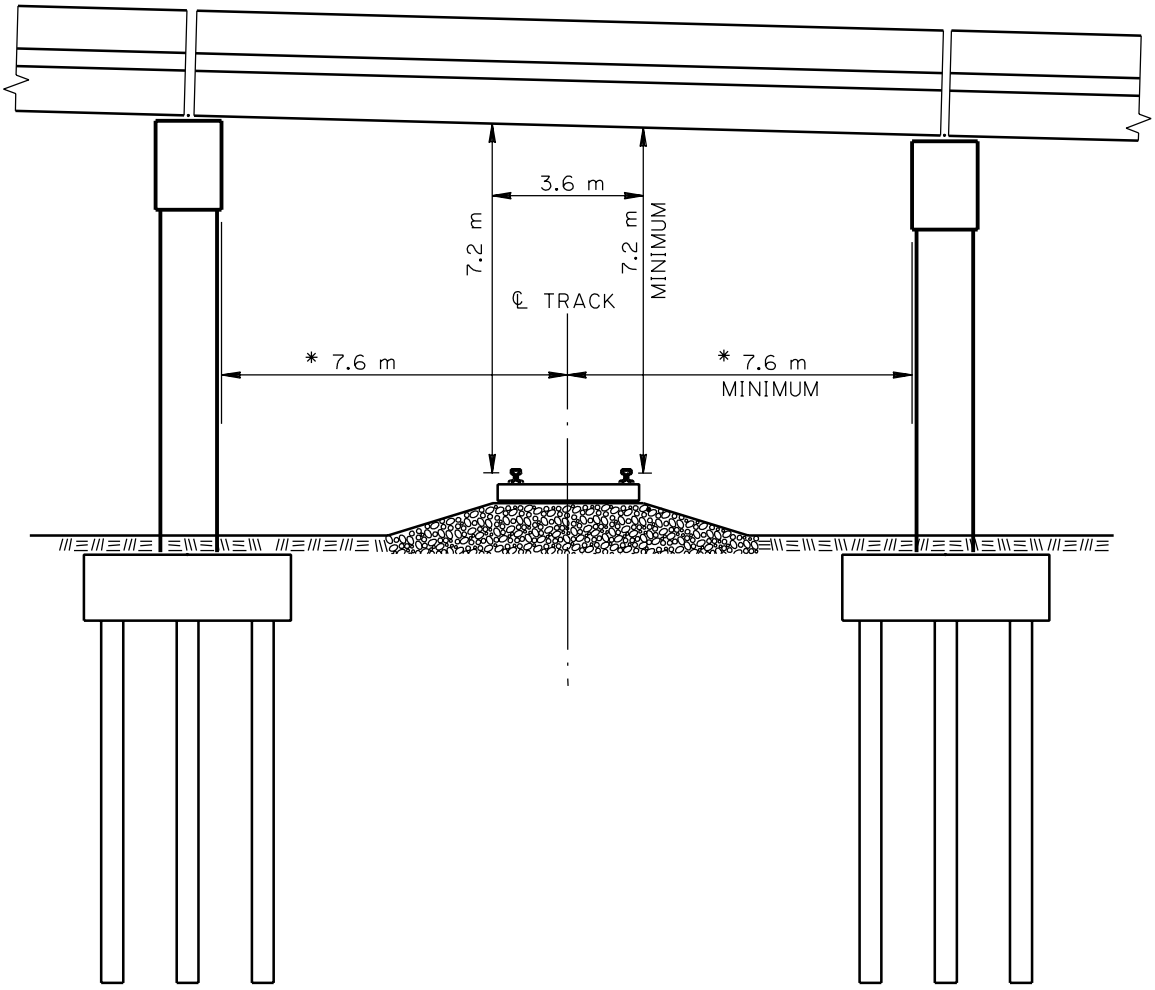
3. What type of tracks are located at this site ?

4. What are the general shoring requirements of this Railroad ?



SHORING REQUIREMENTS

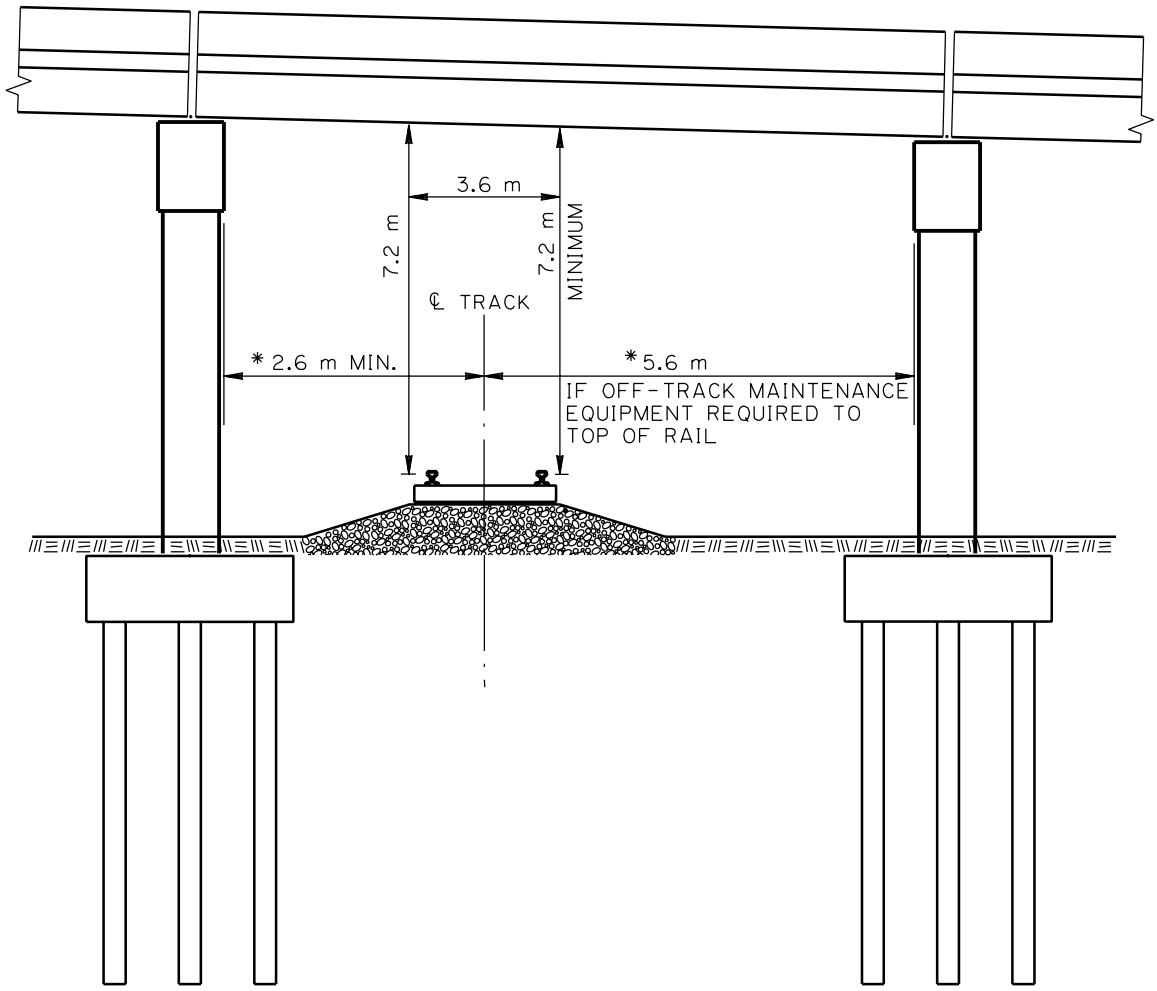
GENERAL RAILROAD SHORING REQUIREMENTS



RECOMMENDED VERTICAL AND HORIZONTAL CLEARANCES

* CLEARANCES MUST BE APPROVED BY THE RAILROAD.

RECOMMENDED RAILROAD CLEARANCE REQUIREMENTS



MINIMUM VERTICAL AND HORIZONTAL CLEARANCES

* CLEARANCES MUST BE APPROVED BY THE RAILROAD. USE MINIMUM CLEARANCES IF RECOMMENDED IN CASES WHERE HORIZONTAL CLEARANCES CANNOT BE MET.

MINIMUM RAILROAD CLEARANCE REQUIREMENTS